

TIC MIXING VALVE
TMV-1
105°F
1.25" / 1.5"
BRADLEY
HL-130
4 GPM
50 GPM
MECHANICAL ROOM

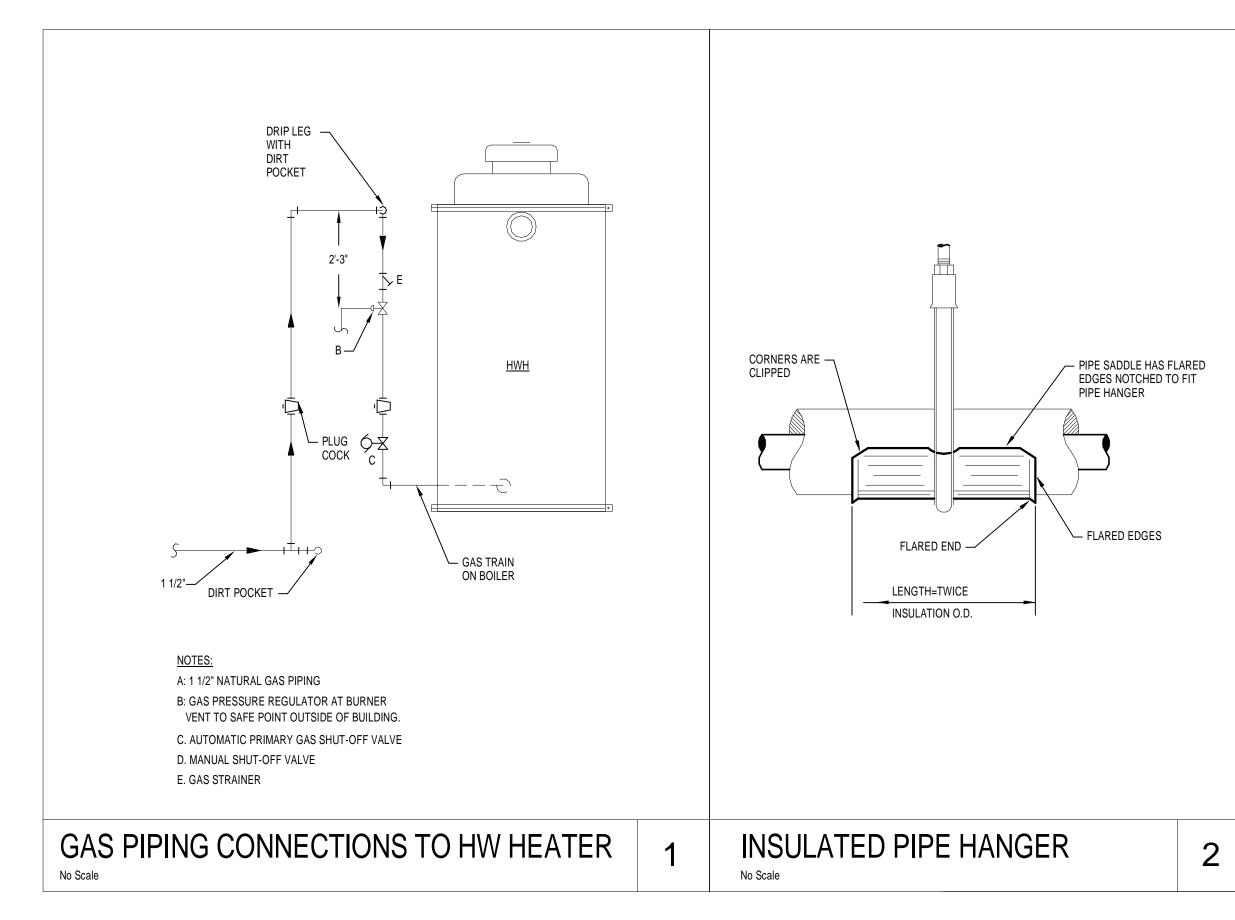
- DIRECTION OF FLOW

- REVISION REFERENCE

- DETAIL REFERENCE: TOP-DETAIL#,

BOTTOM-DRAWING# SHOWN ON

MARK	HWH-1	HWH-2	HWH-3
GAS TYPE	NATURAL	NATURAL	NATURAL
INPUT(BTU)	499,900	499,900	499,900
RECOVERY (GPH)@70°F	300	300	300
STORAGE(GALLONS)	119	119	119
STORAGE TEMP(°F)	140°	140°	140°
MOTOR(VOLTS/PHASE/HERTZ)	120/1/60	120/1/60	120/1/60
SIZE(D"xH")	33"x75"	33"x75"	33"x75"
FLUE SIZE	4"	4"	4"
OPERATING WEIGHT(LBS)	1866	1866	1866
MANUFACTURER	A.O. SMITH	A.O. SMITH	A.O. SMITH
MODEL NUMBER	BTH-500	BTH-500	BTH-500



RPBP - REDUCED PRESSURE BACKFLOW PREVENTOR

SAN

- SANITARY

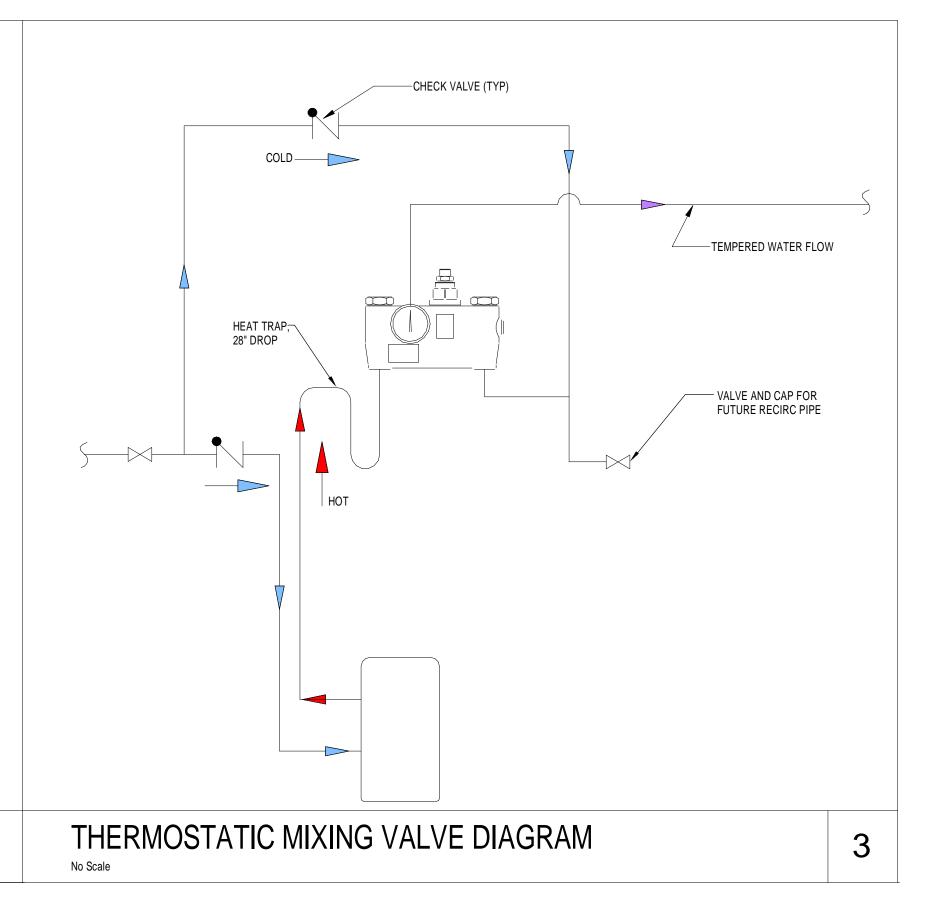
- STORM DRAIN

- SQUARE FEET

STO - OVERFLOW STORM DRAIN

- STORM

- VENT VTR - VENT THRU ROOF WCO - WALL CLEANOUT WHY - WALL HYDRANT WTR - WATER





FOR ARCHITECTURE 874 Dixon Blvd. Cocoa, Florida 32922 PH: 321.636.0274 Fax: 321.639.8986 www.tlc-engineers.com COA #15

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CENTRAL ENERGY WATER HEATING JAIL (STIC LAKE COUNTY,

No.	Date	Description
	04/10/14	ISSUED FOR PRICING

Project No.:	513151
Issue Date:	04-10-14
Drawn By:	GJ
Approved By:	JM
Scale:	12" = 1'-0"
Drawing Title:	

**MECHANICAL** LEGENDS, NOTES, SCHEDULES AND **DETAILS** 

Drawing No.:

M-1

3. THIS CONTRACTOR IS RESPONSIBLE FOR SCHEDULING THE COMPLETION AND INSPECTION OF HIS/HER WORK AND THE WORK OF HIS/HER SUBCONTRACTORS TO COMPLY

4. THIS CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTAL OF BID TO DETERMINE CONDITIONS AFFECTING THE WORK. ANY ITEMS WHICH ARE NOT COVERED IN THE BID DOCUMENTS OR ANY PROPOSED SUBSTITUTIONS SHALL BE LISTED SEPARATELY AND QUALIFIED IN THE CONTRACTORS BID. SUBMITTAL OF A BID SHALL SERVE AS EVIDENCE OF KNOWLEDGE OF EXISTING CONDITIONS AND ANY MODIFICATIONS WHICH ARE REQUIRED TO MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS SHALL BE INCLUDED. FAILURE TO VISIT THE SITE DOES NOT RELIEVE THE CONTRACTOR OF HIS/HER RESPONSIBILITY IN PERFORMANCE OF WORK.

#### B. GENERAL REQUIREMENTS

1. THIS CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, SERVICES, TOOLS, TRANSPORTATION, AND FACILITIES NECESSARY TO PROVIDE A COMPLETE HVAC, PLUMBING, FIRE PROTECTION SYSTEM AS SHOWN ON THE DRAWINGS, CALLED FOR IN THE SPECIFICATIONS AND AS REQUIRED BY JOB CONDITIONS. ALL WORK NECESSARY AND NOT SPECIFICALLY NOTED TO BE PROVIDED BY OTHERS SHALL BE PROVIDED BY THIS CONTRACTOR.

2. ALL WORK SHALL BE PERFORMED IN A NEAT, PROFESSIONAL MANNER USING GOOD CONSTRUCTION PRACTICES.

3. UNLESS SPECIFICALLY NOTED OTHERWISE, MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW, TESTED, LISTED AND LABELED BY AN INDEPENDENT LABORATORY AND SIZED IN CONFORMITY WITH REQUIREMENTS OF STATE AND LOCAL CODES, WHICHEVER IS MORE STRINGENT.

4. ALL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING AND REPAIRING. THIS CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUFFICIENT SERVICE ACCESS TO ALL EQUIPMENT.

5. FIELD MEASURE AND VERIFY REQUIREMENTS FOR EXACT DIMENSION'S. OFFSETS AND ADDITIONAL ELBOWS REQUIRED TO SUIT SITE CONDITIONS ARE CONSIDERED PART OF THE SCOPE.

1. ALL WORK SHALL COMPLY WITH 2010 FLORIDA BUILDING CODE ORDINANCES AND OTHER STATE, COUNTY, CITY AND LOCAL CODES AND ORDINANCES, SAFETY AND HEALTH CODES, NFPA CODES, ENERGY CODES AND ALL OTHER APPLICABLE CODES AND REQUIREMENTS. THIS CONTRACTOR SHALL INQUIRE INTO AND COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, AND REGULATIONS. THIS CONTRACTOR SHALL INCLUDE IN THE BID ANY CHANGES REQUIRED BY CODES AND IF THESE CHANGES ARE NOT INCLUDED IN THE BID, THEY MUST BE QUALIFIED AS A SEPARATE LINE ITEM IN THE BID. AFTER CONTRACT IS ISSUED, NO ADDITIONAL COST DUE TO CODE ISSUES SHALL BE REIMBURSED TO THE CONTRACTOR.

#### D. LICENSES, PERMITS, INSPECTIONS & FEES

- 1. THIS CONTRACTOR SHALL OBTAIN AND PAY FOR ALL LICENSES, PERMITS, INSPECTIONS AND FEES REQUIRED OR RELATED TO DIVISION 15000 WORK.
- 2. FURNISH TO THE (OWNER) ALL CERTIFICATES OF INSPECTION AND FINAL INSPECTION APPROVAL AT COMPLETION OF PROJECT.

- 1. THIS CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORK PROVIDED UNDER HIS/HER CONTRACT AND SHALL MAKE GOOD, REPAIR OR REPLACE AT HIS/HER OWN EXPENSE, ANY DEFECTIVE WORK, MATERIAL OR EQUIPMENT DISCOVERED WITHIN A PERIOD OF 12 MONTHS FROM THE DATE OF ACCEPTANCE (IN WRITING) OF THE
- INSTALLATION. EXTENDED WARRANTIES ARE AS SPECIFIED WITH INDIVIDUAL EQUIPMENT. 2. THE HOT WATER HEATERS SHALL BE FURNISHED WITH A 5 YEAR HEAT EXCHANGER WARRANTY.

#### F. PHASING REQUIREMENTS (IF APPLICABLE)

1. THIS CONTRACTOR SHALL INCLUDE IN THE BID ALL NECESSARY SERVICE REQUIRED TO KEEP THE OPERATING PORTION OF THE BUILDING'S (HVAC, PLUMBING AND SPRINKLER) SERVICES IN OPERATION. CONTRACTOR MUST SCHEDULE IN WRITING ONE WEEK PRIOR TO ANY SHUT DOWN OF (THE HVAC, PLUMBING OR FIRE PROTECTION)

#### G. DEMOLITION (IF APPLICABLE)

- 1. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THE DEMOLITION OF EXISTING WORK AND THE RENOVATION WORK. COORDINATE WITH THE OTHER CONTRACTORS ANY EXISTING EQUIPMENT REQUIRED TO BE LEFT INTACT.
- 2. THIS CONTRACTOR SHALL INCLUDE AND WILL BE HELD RESPONSIBLE FOR, THE REMOVAL OF ALL EXISTING (FIRE PROTECTION SYSTEMS, PLUMBING FIXTURES, PIPING SYSTEMS, HVAC UNITS, REFRIGERANT RECAPTURE, EXHAUST FANS), AND ASSOCIATED ROOF CURBS OR RAILS NOT TO BE REUSED ON THIS PROJECT, UNLESS SPECIFICALLY NOTED OTHERWISE. CONTRACTOR SHALL VERIFY ALL PRESUMED ABANDONED (EQUIPMENT, PIPES, DUCTWORK AND EQUIPMENT) PRIOR TO REMOVAL. ROOF CURBS SHALL BE REMOVED AND THE ROOF PATCHED. ALL EXTRANEOUS ITEMS IN THE SPACE, ASSOCIATED WITH THE SPACE, OR ON THE ROOF NOT APPLICABLE TO THE NEW WORK MUST BE REMOVED AND ROOF/WALL/FLOOR PATCHED/REPAIRED TO MATCH EXISTING SURROUNDINGS. EXISTING ABANDONED (PIPES, DUCTS OR EQUIPMENT) IN THE FLOOR, EMBEDDED IN CONCRETE, OR OTHERWISE INACCESSIBLE ARE TO BE CUT OFF AND SEALED BELOW OR WITHIN THE FLOOR OR WALL WHEN THEY ARE NOT TO BE REUSED IN THIS PROJECT. IF REQUIRED BY CODES, ABANDONED (PIPING AND/OR DUCTWORK) MUST BE REMOVED TO POINT OF ORIGIN. CONFIRM THE EXTENT OF DEMOLITION PRIOR TO BID AND INCLUDE IN BID PROPOSAL.

### H. SLEEVES

- 1. THIS CONTRACTOR SHALL PROVIDE SLEEVES TO PROTECT EQUIPMENT OR FACILITIES IN THE INSTALLATION. EACH SLEEVE SHALL EXTEND THROUGH ITS RESPECTIVE FLOOR, WALL OR PARTITION AND SHALL BE CUT FLUSH WITH EACH SURFACE EXCEPT SLEEVES THAT PENETRATE THE FLOOR, WHICH SHALL EXTEND 2" ABOVE THE FLOOR. CONTRACTOR SHALL COORDINATE ANY CORE DRILLING OR CUTTING OF OPENINGS IN MASONRY FLOORS OR WALLS.
- 2. ALL SLEEVES AND OPENINGS THROUGH FIRE-RATED WALLS AND/OR FLOORS SHALL BE FIRE SEALED WITH CALCIUM SILICATE, SILICONE "RTV" FOAM, "3M" FIRE RATED SEALANTS OR EQUAL, SO AS TO RETAIN THEIR FIRE RATING.
- 3. SLEEVES IN BEARING AND MASONRY WALLS, FLOORS, AND PARTITIONS SHALL BE STANDARD WEIGHT STEEL PIPE FINISHED WITH SMOOTH EDGES. FOR OTHER THAN MASONRY PARTITIONS, THROUGH SUSPENDED CEILINGS, OR FOR CONCEALED VERTICAL PIPING, SLEEVES SHALL BE NO. 22 U.S.G. GALVANIZED STEEL MINIMUM.

#### <u>I. HANGERS</u>

- 1. PROVIDE HANGERS AND SUPPORTS FOR ALL PIPING, DUCTWORK, AND EQUIPMENT IN ACCORDANCE WITH SMACNA, MSS,ASME, AND ASHRAE STANDARDS.
- 2. HANGERS SHALL INCLUDE ALL MISCELLANEOUS STEEL SUCH AS ANGLE IRON, BANDS, C-CLAMPS WITH RETAINING CLIPS, CHANNELS, HANGER RODS, ETC., NECESSARY FOR THE INSTALLATION OF WORK.
- 3. HANGERS SHALL BE FASTENED TO BUILDING STEEL, CONCRETE OR MASONRY. HANGING FROM METAL DECK IS NOT PERMITTED. HANGERS MUST BE ATTACHED TO UPPER CHORDS OF BAR JOISTS. WHERE INTERFERENCES OCCUR, AND IN ORDER TO SUPPORT (DUCTWORK OR PIPING) THE CONTRACTOR SHALL INSTALL TRAPEZE TYPE HANGERS OR SUPPORTS WHICH SHALL BE LOCATED WHERE THEY DO NOT INTERFERE WITH ACCESS TO FIRE DAMPERS, VALVES, AND OTHER EQUIPMENT.
- 4. HANGERS FOR ALL INSULATED PIPING SHALL BE SIZED AND INSTALLED FOR THE OUTER DIAMETER OF INSULATION. INSTALL 6" LONG SPLIT CIRCLE GALVANIZED SADDLE BETWEEN THE HANGER AND THE PIPE INSULATION. PROVIDE HIGH DENSITY INSULATION INSERT BETWEEN THE SADDLE AND THE PIPE.
- 5. HANGERS AND PIPING OF DISSIMILAR METALS SHALL BE DI-ELECTRICALLY SEPARATED.

### J. DIRT AND DUST CONTROL

1. SCREEN OFF ALL AREAS WHERE CONSTRUCTION IS TO TAKE PLACE FROM THE AREAS TO REMAIN INHABITED. INHABITED AREAS SHALL REMAIN DUST AND DEBRIS FREE DURING CONSTRUCTION. CLEAN ANY AREAS OUTSIDE DESIGNATED CONSTRUCTION AREA WHICH MAY HAVE BECOME SOILED DUE TO CONSTRUCTION.

#### G. EQUIPMENT, PIPING AND INSTALLATION

- 1. REFER TO PLANS FOR SCHEDULES OF EQUIPMENT AND FIXTURES. AMERICAN STANDARD, KOHLER AND CRANE ARE CONSIDERED ACCEPTABLE AS EQUALS.
- 2. MAINTAIN A MINIMUM CLEARANCE OF 6" BETWEEN PLUMBING PIPING AND EQUIPMENT AND ALL FIRE/SMOKE RATED WALLS.
- 3. INSTALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. INSTALL UNITS LEVEL AND PLUMB, FIRMLY ANCHORED IN LOCATIONS INDICTATED. MAINTAIN MANUFACTURER'S CLEARANCES. SUPPORT ALL EQUIPMENT AS REQUIRED TO PROVIDE A RIGID, VIBRATION FREE INSTALLATION.
- 4. POTABLE WATER PIPING SHALL BE AS FOLLOWS:
- A. BELOW GRADE: TYPE 'K', ANNEALED TYPE TEMPERED COPPER TUBE FOR PIPE SIZES 2 INCHES AND SMALLER. BRAZE ALL JOINTS.
- B. ALL OTHER: TYPE 'L' DRAWN COPPER TUBE WITH WROUGHT COPPER FITTINGS AND 95-5 TIN-ANTIMONY SOLDER.
- 5. PIPING OF DISSIMILAR METALS SHALL BE DI-ELECTRICALLY SEPARATED.
- 6. FIELD VERIFY EXACT CONNECTION POINTS PRIOR TO SUBMITTING BID AND NOTIFY ENGINEER IF CONDITIONS ARE NOT AS SHOWN ON THE PLANS OR AS STATED IN THE SPECIFICATIONS. CONTRACTOR SHALL VERIFY THE OPERABILITY OF ENTIRE SYSTEM PRIOR TO TIE-IN AS FOLLOWS: A. SNAKE SANITARY FOR A DISTANCE OF 100 FEET AND REPORT ANY BLOCKAGE.
- B. TEST WATER PRESSURE TO INSURE MINIMUM PSI MATCHES MOST DEMANDING EQUIPMENT SUPPLIED.
- INSULATE ALL HOT AND COLD WATER PIPING WITH 1" THICK (K=0.23 @ 75°F) FIBERGLASS PIPE INSULATION WITH AN ALL SERVICE JACKET TO MEET LOCAL CODES AND UL FLAME SPREAD AND SMOKE DEVELOPED RATING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- 8. INSULATE THE TRAP, SANITARY AND SUPPLY PIPES UNDER LAVORATIES WITH TRUEBRO MODEL 102W "HANDI LAV GUARD" INSULATION KIT OR EQUAL.
- 9. INSTALL ALL NECESSARY PIPE HANGERS, SADDLES, AND CARRIERS TO PROPERLY SUPPORT ALL PIPING AND FIXTURES. HANGERS SHALL SUIT TYPE OF PIPING PROVIDED AND BE SPACED AT A MAXIMUM SPAN OF 5 FEET.
- 10. STERILIZE WATER SYSTEM IN ACCORDANCE WITH LOCAL CODES.
- 11. TEST ENTIRE PLUMBING SYSTEM IN ACCORDANCE WITH 2004 FLORIDA PLUMBING CODE.
- 12. PROVIDE WATER METER AND REMOTE READER PER LOCAL UTILITIES REQUIREMENT, IF APPLICABLE.
- 13. CONDENSATE DRAIN: PROVIDE POLYVINYL CHLORINE (PVC) SCHEDULE 40 PLASTIC PIPE (TYPE (DWV) IN CONFORMANCE WITH STANDARD ASTM D2665.
- 14. VALVES: PROVIDE BALL VALVE NIBCO SERIES 585-70 FOR SHUT-OFF
- 15. PROVIDE ACCESS PANELS WHERE REQUIRED FOR OPERATION, MAINTENANCE AND BALANCING OR PLUMBING EQUIPMENT
- 16. PROVIDE WATER HAMMER ARRESTORS AT EACH BRANCH LINE.

#### H. GAS PIPING

- FURNISH AND INSTALL A COMPLETE GAS PIPING SYSTEM.
- 2. GAS LINES SHALL BE BLACK STEEL, SCHEDULE 40, ASTM A-53, WITH MALLEABLE THREADED FITTINGS FOR 2" AND SMALLER, AND WITH WELDED JOINTS FOR 2-1/2" AND
- 3. FURNISH AND INSTALL A GAS COCK, DIRT LEG, AND UNION CONNECTION AT EACH PIECE OF EQUIPMENT.
- 4. PITCH PIPING AT A UNIFORM GRADE OF 1/4" IN 15 FEET UPWARD IN DIRECTION OF FLOW. SUPPORT PIPING EVERY 5 FEET, AS DETAILED ON DRAWINGS, OR BY STANDARD INDUSTRY PRACTICE, WHICHEVER IS MORE STRINGENT.
- 5. GAS PIPING EXPOSED ON ROOF SHALL BE PAINTED WITH RUST-INHIBITING PAINT.
- 6. GAS PIPING INSTALLED IN RETURN AIR PLENUMS SHALL BE SLEEVED AND VENTED OR WELDED IN ACCORDANCE WITH THE LOCAL GAS COMPANY, LOCAL CODE AND APPLICABLE NFPA 54 CODES.
- 7. TESTING AND PURGING OF GAS PIPING SHALL BE DONE PER THE REQUIREMENTS OF THE LOCAL GAS COMPANY, LOCAL CODES AND APPLICABLE NFPA CODES.
- 8. CONTACT AND COORDINATE GAS SERVICE, METER AND REGULATOR REQUIREMENTS WITH THE LOCAL GAS COMPANY PRIOR TO BID. INCLUDE INSTALLATION COST OF GAS METER AND REGULATOR IN BID.

#### I. LABELS/PIPE MARKERS

- 1. FURNISH AND INSTALL PIPE IDENTIFICATION MARKERS ON ALL PIPES INSTALLED UNDER THIS CONTRACT. MARKERS SHALL BE A MINIMUM OF 1-1/2" X 8" AND IDENTIFIED IN ACCORDANCE WITH THE BACKGROUND AND LETTER COLORS ISSUED BY THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI). MARKERS SHALL BE MANUFACTURED BY CHAMPION AMERICA INC., BRADY, SETON, OR EQUAL.
- 2. PIPING SHALL BE IDENTIFIED AS FOLLOWS: CONDENSATE, REFRIGERANT LIQUID, REFRIGERANT SUCTION, AND DIRECTIONAL ARROWS. ALL IDENTIFICATIONS MUST BE VISIBLE AT EQUIPMENT.

### J. STEEL FRAMING FOR SUPPORT

1. PROVIDE ALL NECESSARY STEEL FRAMING REQUIRED TO INSTALL ALL HVAC EQUIPMENT AS DESCRIBED OR IMPLIED ON THE DRAWINGS. ALL PENETRATIONS OF EXISTING STRUCTURE SHALL BE DONE AT THIS CONTRACTOR'S EXPENSE.

#### K. SYSTEM START-UP

1. THIS CONTRACTOR SHALL INCLUDE AS A BASE, 2-HOURS OF START-UP TIME PLUS AN ADDITIONAL 2-HOURS OF START-UP TIME PER HVAC UNIT SHOWN ON DRAWINGS.

#### L. FINAL INSPECTIONS

1. ASIDE FROM NORMAL INTERIM INSPECTIONS OF WORK IN PLACE, THE ENGINEER SHALL BE NOTIFIED (IN WRITING) TO INSPECT THE FINISHED INSTALLATION UPON COMPLETION FOR COMPLIANCE WITH THE PLANS, SPECIFICATIONS AND CODES. THE INSTALLING CONTRACTOR SHALL BE RESPONSIBLE TO BRING ALL ITEMS REPORTED



FOR ARCHITECTURE 874 Dixon Blvd. Cocoa, Florida 32922 PH: 321.636.0274 Fax: 321.639.8986 www.tlc-engineers.com COA #15

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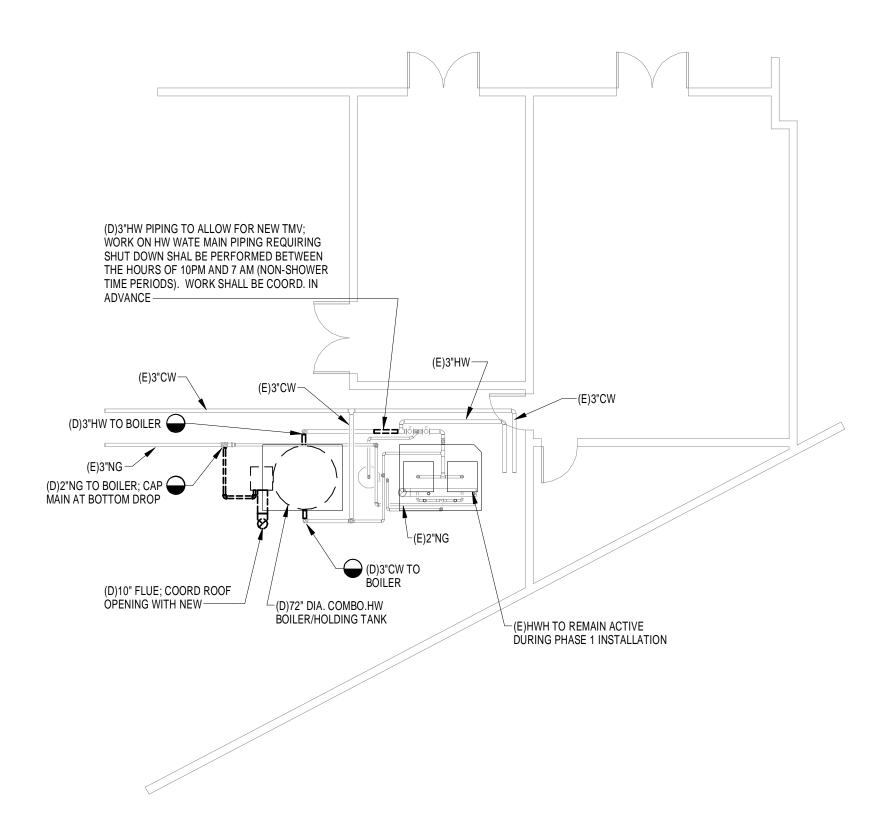
Project No.:	5131
Issue Date:	04-10-
Drawn By:	(
Approved By:	J
Scale:	12" = 1'-

MECHANICAL

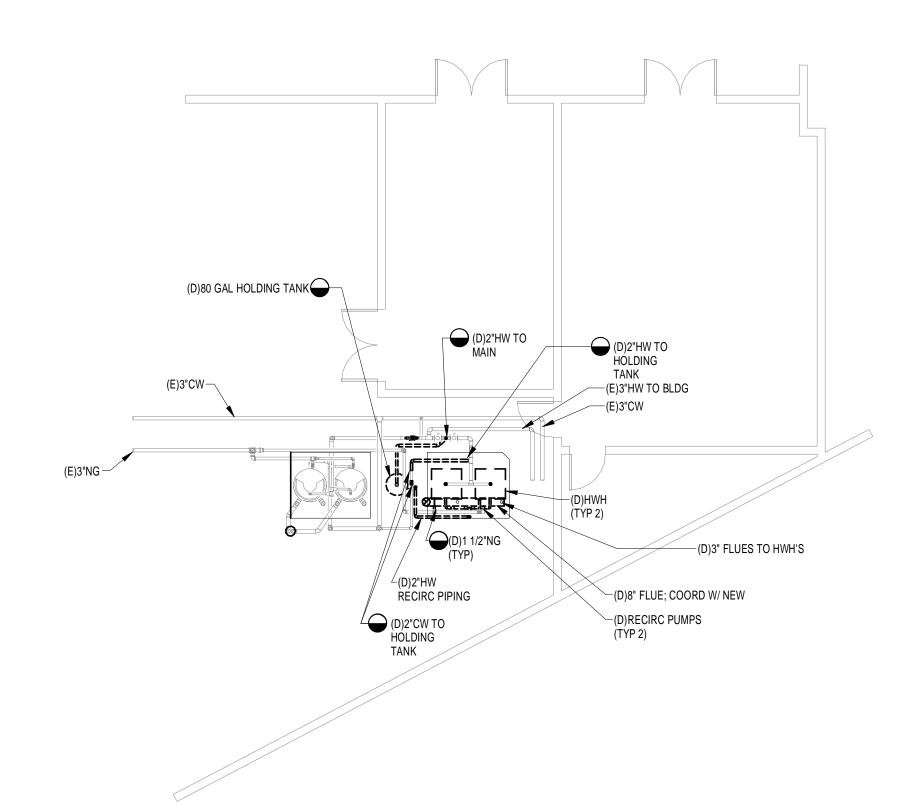
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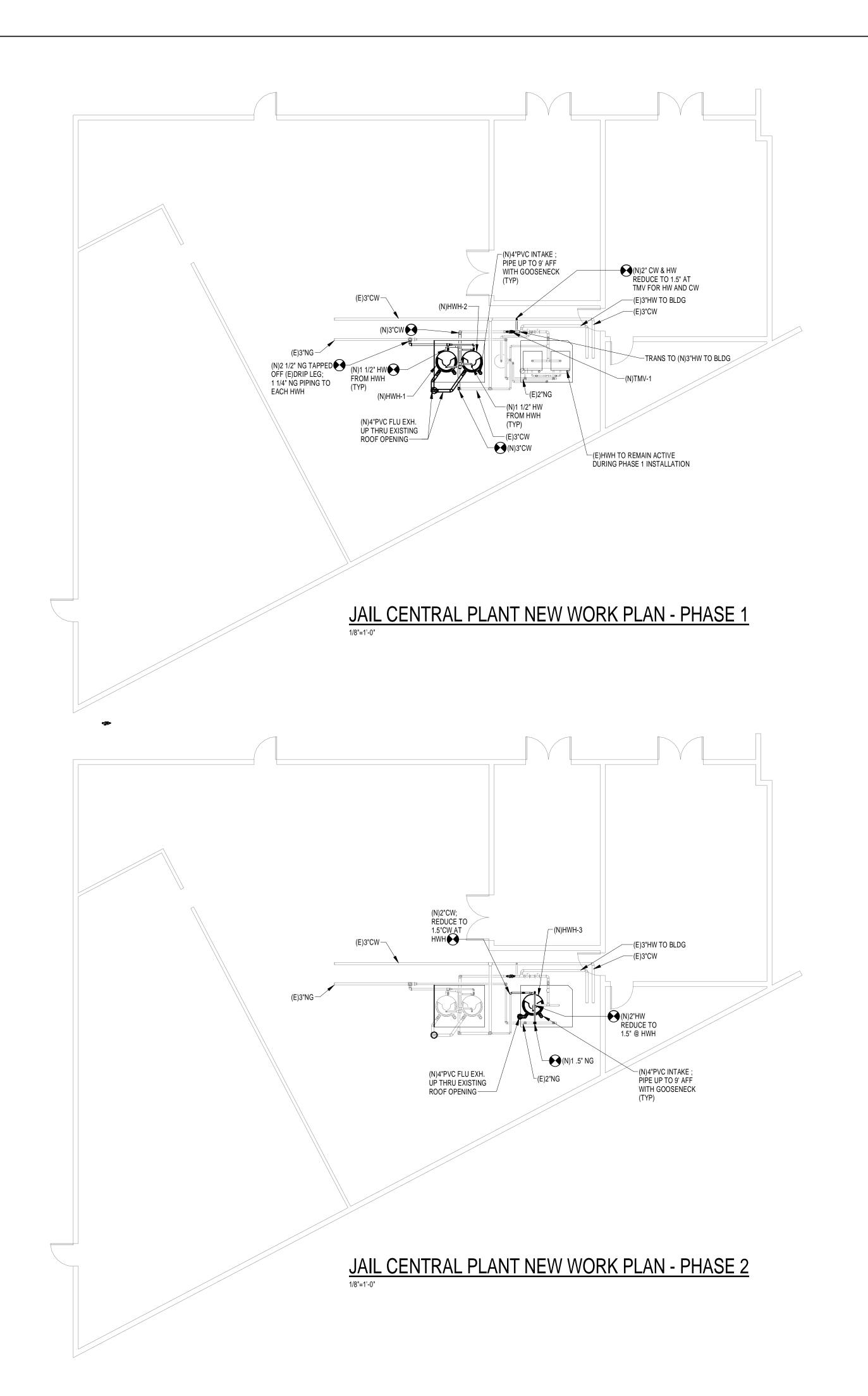
M-2



# JAIL CENTRAL PLANT DEMOLITION PLAN - PHASE 1



JAIL CENTRAL PLANT DEMOLITION PLAN - PHASE 2
1/8"=1'-0"





ENGINEERING
FOR ARCHITECTURE
874 Dixon Blvd.
Cocoa, Florida 32922
PH: 321.636.0274
Fax: 321.639.8986
www.tlc-engineers.com
COA #15
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No.	Date	Description
	04/10/14	ISSUED FOR PRICING

Project No.: 513151 Drawn By: 1/8" = 1'-0"

Drawing Title: MECHANICAL **PLANS** 

Drawing No.:

M-3

REFER TO VOLTAGE DROP CHART BELOW FOR CONDUCTOR SIZES FOR BRANCH CIRCUITS

CONTRACTOR SHALL UPSIZE BRANCH CIRCUIT WIRE SIZE AS REQUIRED TO COMPENSATE

VOLTAGE DROP FROM LENGTHENING OF CIRCUITS DUE TO FIELD ROUTING. FINAL INSTALLATION

SHALL MEET FLORIDA BUILDING CODE REQUIREMENT OF: MAXIMUM BRANCH CIRCUIT VOLTAGE

120 VOLT (BASIS 1500 WATT)

CIRCUIT LENGTH

0 - 70'

71' - 115'

MIN. CONDUCTOR

UP SIZE FOR VOLTAGE DROP

#12 AWG

#10 AWG

"To the best of the engineer's knowledge, these plans and specifications comply with the 2010

#8 AWG

8. PROVIDE HACR RATED CIRCUIT BREAKERS FOR ALL PLUMBING EQUIPMENT.

Florida Building Code and the 2010 Florida Fire Prevention Code."

CONDUCTORS.

DROP OF 3%:

116' - 180'

## **DEMOLITION NOTES:**

- REFER TO DEMOLITION DRAWINGS FOR EXTENT OF ELECTRICAL DEMOLITION WORK. THE
  ELECTRICAL CONTRACTOR SHALL DISCONNECT ELECTRICAL SERVICES TO ALL EQUIPMENT BEING
  REMOVED.
- REMOVE ALL CONDUIT LEFT EXPOSED BY REMOVAL OF WALLS AND CEILINGS IN REMODELED AREAS. PLUG BOTH ENDS OF REMAINING CONDUIT IN WALL OR FLOOR WHERE CUT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING ALL OPENINGS IN EXISTING CONSTRUCTION AFTER REMOVAL OF EQUIPMENT AND ELECTRICAL DEVICES.
- 4. FOR ALL EQUIPMENT AND WIRING DEVICES BEING REMOVED: REMOVE CONDUCTORS BACK TO PANEL, TURN BREAKER TO "OFF" AND LABEL THE CIRCUIT "SPARE" ON THE PANEL DIRECTORY. WHERE THERE ARE WIRING DEVICES TO REMAIN ON THE BRANCH CIRCUIT, REMOVE CONDUCTORS BACK TO JUNCTION BOX.
- 5. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING WORK AND OBTAIN CLARIFICATION FROM ARCHITECT/ENGINEER.
- . INTERRUPTION OF SERVICES: CONTRACTOR SHALL COORDINATE SERVICE INTERRUPTION WITH OWNER AND UTILITY COMPANY AND SHALL NOT INTERRUPT POWER WITHOUT OWNER/ARCHITECT'S PERMISSION.

## ELECTRICAL SYMBOL LEGEND

#### POWER

MANUAL MOTOR STARTER WITH OVERLOAD ELEMENTS
WP = WEATHERPROOF ENCLOSURE.

JUNCTION BOX WITH IDENTIFIED BLANK COVER

### SERVICE AND DISTRIBUTION

FUSED DISCONNECT SWITCH. 3=3-POLE, 60=60 AMP. ASTERISK INDICATES TO FUSE ACCORDING TO MANUFACTURERS RECOMMENDATIONS. NEMA 3R RATED OUTDOOR LOCATIONS. NEMA 1 INDOOR LOCATIONS.

NON-FUSED DISCONNECT SWITCH, 3=POLE, 60=60 AMP, NEMA 3R RATED OUTDOOR LOCATIONS. NEMA 1 INDOOR LOCATIONS.

COMBINATION DISCONNECT MOTOR STARTER.

ASTERISK INDICATES TO FUSE ACCORDING TO EQUIPMENT

MANUFACTURERS RECOMMENDATIONS. NEMA 1 RATED INDOOR, NEMA 3R

RATED OUTDOORS. NEMA SIZE AS INDICATED ON DRAWINGS.

### GENERAL:

THE INSTALLATION SHALL COMPLY WITH ALL LOCAL LAWS AND ORDINANCES APPLICABLE TO ELECTRICAL INSTALLATIONS, AND WITH THE REGULATIONS OF THE NFPA WHERE SUCH REGULATIONS DO NOT CONFLICT WITH THOSE LAWS. OBTAIN ALL PERMITS REQUIRED.

MANUFACTURERS DRAWINGS AND DATA:
SUBMIT TO THE ENGINEER FOR APPROVAL FIVE (5) COPIES OF THE
COMPLETE LIST OF ALL ELECTRICAL MATERIALS WHICH ARE PROPOSED TO

COMPLETE LIST OF ALL ELECTRICAL MATERIALS WHICH ARE PROPOSED TO BE FURNISHED FOR THIS PROJECT. AS A MINIMUM THE SUBMITTAL SHALL INCLUDE PANELBOARDS, A.I.C. OF BREAKERS INSTALLED, LIGHT FIXTURES, BALLASTS, AND LAMPS.

#### STANDARD OF MATERIALS AND WORKMANSHIP:

ALL MATERIALS, EQUIPMENT AND APPARATUS COVERED BY THIS SPECIFICATION SHALL BE NEW, OF CURRENT MANUFACTURE AND SHALL BEAR THE SEAL OF APPROVAL OF THE UNDERWRITERS LABORATORIES. ALL WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL PRESENT A NEAT AND MECHANICAL APPEARANCE WHEN COMPLETED.

#### STORAGE OF MATERIALS:

THE CONTRACTOR SHALL PROVIDE SUITABLE STORAGE FACILITIES FOR ALL MATERIAL FURNISHED BY HIM UNDER THIS CONTRACT. ALL ITEMS TO BE INSTALLED MUST BE FREE OF RUST AND DIRT.

# FIREPROOFING: ALL CONDUIT AND BOXES PASSING THROUGH OR INSTALLED WITHIN FIRE WALLS AND SMOKE WALLS SHALL BE INSTALLED SO AS TO MAINTAIN THE INTEGRITY OF THE WALL THROUGH WHICH IT PASSES. BOXES TO BE

INSTALLED WITH 1/8" OF WALL SURFACE.

TESTING:
AT THE COMPLETION OF THE WORK, A THOROUGH TEST SHALL BE MADE IN THE PRESENCE OF THE ENGINEER OR HIS REPRESENTATIVE. AND THE

# AT THE COMPLETION OF THE WORK, A THOROUGH TEST SHALL BE MADE IN THE PRESENCE OF THE ENGINEER OR HIS REPRESENTATIVE, AND THE ENTIRE SYSTEM SHALL BE SHOWN TO BE IN PERFECT WORKING CONDITION AS INTENDED BY THESE SPECIFICATIONS. GUARANTEE:

THE CONTRACTOR SHALL LEAVE THE ENTIRE ELECTRICAL SYSTEM INSTALLED BY HIM UNDER THIS CONTRACT IN PROPER WORKING ORDER AND SHALL REPLACE, WITHOUT ADDITIONAL CHARGE, ALL WORK OR MATERIAL WHICH MAY DEVELOP DEFECTS, ORDINARY WEAR AND TEAR OR DAMAGE RESULTING FROM IMPROPER HANDLING EXCEPTED, WITHIN A PERIOD OF ONE YEAR FROM THE DATE OF FINAL TESTING AND ACCEPTANCE BY THE ENGINEER. BALLASTS SHALL BE INCLUDED BUT LAMPS SHALL BE EXCLUDED.

#### IDENTIFICATION:

JUNCTION BOX IDENTIFICATION:
EACH JUNCTION BOX COVER SHALL BE LABELED WITH A PERMANENT
"MAGIC" MARKER OR OTHER MEANS TO IDENTIFY THE CIRCUITS WITHIN. FOR
EXAMPLE, A JUNCTION BOX CONTAINING LIGHTING CIRCUITS 21, 23, 25 FROM
PANEL L2A WOULD BE LABELED "L2A-21,23,25". TELEPHONE JUNCTION BOXES
SHALL BE LABELED "T". FIRE ALARM AND OTHER SYSTEM JUNCTION BOXES
SHALL BE LABELED ACCORDINGLY.

## **ELECTRICAL SPECIFICATIONS**

#### **CONDUIT AND FITTINGS:**

ARE NOT ACCEPTABLE).

ALL INTERIOR CONDUITS SHALL BE ELECTRICAL METALLIC TUBING (EMT).

FITTINGS FOR ELECTRICAL METALLIC TUBING SHALL BE STEEL SET SCREW
OR COMPRESSION TYPE. DIE CAST FITTINGS OR CONNECTORS WILL NOT BE
ACCEPTABLE. EMT CONNECTORS TO BE SIMILAR TO T&B "INSULINE" WITH
COMPLETELY INSULATED THROATS. (FIELD APPLIED INSULATED THROATS

CONDUITS BUSHINGS SHALL BE METALLIC WITH INSULATED THROATS. INSULATING GROUNDING TYPE BUSHINGS SHALL BE PROVIDED WHERE REQUIRED UNDER 'GROUNDING'.

CONDUITS SHOWN ROUTED OVERHEAD MAY NOT BE INSTALLED IN OR BELOW SLABS OR IN WALLS.

NOT MORE THAN THREE CIRCUITS MAY BE INSTALLED IN ANY ONE CONDUIT UNLESS OTHERWISE INDICATED.

ALL CONDUITS SHALL BE CONCEALED UNLESS OTHERWISE NOTED ON THE DRAWINGS. EXPOSED CONDUIT WILL BE PERMITTED ONLY AS SHOWN ON THE DRAWINGS. EXPOSED CONDUIT SHALL BE RUN PARALLEL WITH OR AT RIGHT ANGLES TO THE BUILDING WALLS. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH A PLASTIC OR NYLON FISH WIRE.

EXPOSED CONNECTIONS TO MOTORS AND EQUIPMENT FROM OVERHEAD CONDUITS SHALL CONSIST OF VERTICAL CONDUIT (MINIMUM SIZE 1") FROM TYPE "LL" OR "LR" UNILET TO FLOOR FLANGE. CONNECTION TO EQUIPMENT SHALL BE WITH FLEXIBLE METAL CONDUIT FROM TYPE FDT BOXES LOCATED IN THE VERTICAL CONDUIT.

FLEXIBLE CONDUIT IN ALL AREAS OTHER THAN CEILING PLENUM SUBJECT TO MOISTURE SHALL BE LIQUID-TIGHT FLEXIBLE CONDUIT. ALL ELECTRICAL CONNECTIONS TO VIBRATION ISOLATED EQUIPMENT SHALL BE MADE WITH FLEXIBLE CONDUIT. ALL CONDUITS ENTERING THE BUILDING SHALL BE SUITABLY SEALED TO PREVENT THE ENTRANCE OF MOISTURE.

#### **CONDUCTORS**:

ALL CONDUCTORS SHALL BE COPPER OF NOT LESS THAN NINETY-EIGHT PERCENT (98%) CONDUCTIVITY, WITH NEC TYPE THHN/THWN, 600 VOLT INSULATION. CONDUCTORS NO. 12 THROUGH NO. 10 SHALL BE SOLID, AND NO. 8 AND LARGER SHALL BE STRANDED. NO CONDUCTORS SMALLER THAN NO. 12 SHALL BE USED EXCEPT AS OTHERWISE NOTED. CONTROL CONDUCTORS SHALL BE NO. 14.

NEUTRAL WIRES SHALL BE PIGTAILED TO RECEPTACLES SO THAT RECEPTACLE CAN BE REMOVED FOR REPLACEMENT WITHOUT THE NEUTRAL CONNECTION TO OTHER RECEPTACLES ON THE CIRCUIT BEING DISCONNECTED. WHEN STRANDED WIRE IS USED FOR RECEPTACLE AND LIGHTING CIRCUIT, CONNECTIONS TO THE DEVICES SHALL BE MADE USING VINYL INSULATED "STAKON" CONNECTOR TERMINALS.

#### CABLE AND WIRE SPLICES:

THE MATERIALS SHALL BE COMPATIBLE WITH THE CONDUCTORS,
INSULATIONS AND PROTECTIVE JACKETS OF THE RESPECTIVE CABLES AND

FOR CONDUCTOR SIZED NO. 6 AWG OR LARGER: SPLICES IN CONDUCTORS SHALL BE MADE WITH INDENTER, CRIMP CONNECTORS AND COMPRESSION TOOLS OR WITH BOLTED CLAMP TYPE CONNECTORS TO INSURE A SATISFACTORY MECHANICAL AND ELECTRICAL JOINT.

#### JUNCTION BOXES:

ALL JUNCTION BOXES AND PULL BOXES SHALL BE SIZED PER N.E.C.
REQUIREMENTS AND BE OF THE PROPER NEMA CLASSIFICATION FOR THE
LOCATIONS WHERE THEY ARE INSTALLED. WHERE BOXES OCCUR ABOVE
OTHER THAN LIFT-OUT CEILINGS, ACCESS PANELS MUST BE PROVIDED.

#### SAFETY SWITCHES:

SAFETY SWITCHES SHALL BE "HD" (HEAVY DUTY) UNLESS NOTED OTHERWISE, FUSED OR NON-FUSIBLE AS INDICATED WITH NUMBER OF POLES AS SHOWN OR REQUIRED. SAFETY SWITCHES FOR EQUIPMENT MAY BE NON-FUSED ONLY IF EQUIPMENT IS UL TESTED WITH CIRCUIT BREAKER PROTECTION. DISCONNECT SWITCHES SHALL BE PROVIDED FOR ALL MOTORS.

ACCEPTABLE MANUFACTURERS: SQ-D, GE, SIEMENS.

#### **GROUNDING**:

IN GENERAL A GROUND WIRE SHALL BE INSTALLED IN EVERY CONDUIT. THE CONDUIT INSTALLATION ITSELF SHALL SERVE AS AN ADDITIONAL GROUNDING MEANS.

WHERE CONDUITS TERMINATE WITHOUT MECHANICAL CONNECTION (I.E. LOCKNUTS AND BUSHINGS) TO PANELBOARDS, AND FOR ALL TERMINATIONS OF CONDUIT WITH #4 OR LARGER; AND FOR ALL SIZES OF METALLIC CONDUIT (RIGID OR FLEXIBLE) TERMINATING IN CONCENTRIC KNOCKOUTS, THE FOLLOWING PROCEDURE SHALL BE FOLLOWED: EACH CONDUIT SHALL BE PROVIDED WITH AN INSULATING GROUND BUSHING AND EACH BUSHING CONNECTED WITH A BARE COPPER CONDUCTOR TO THE GROUND BUS IN THE ELECTRICAL EQUIPMENT. THE GROUND CONDUCTOR SHALL BE IN ACCORDANCE WITH THE ARTICLE OF GROUNDING OF NEC.

A BONDING AND SINGLE POINT GROUNDING SYSTEM SHALL BE PROVIDED TO INTERCONNECT THE MAIN ELECTRIC SERVICE GROUND, LIGHTNING PROTECTION SYSTEM GROUNDS AND ALL SPECIAL ELECTRONIC SYSTEM ISOLATED GROUNDS.

ENGINEERING

FOR ARCHITECTURE
874 Dixon Blvd.
Cocoa, Florida 32922
PH: 321.636.0274
Fax: 321.639.8986
www.tlc-engineers.com
COA #15
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COUNTY JAIL CENTRAL ENERGY NT DOMESTIC WATER HEATING

No.	Date	Description
	04/10/14	ISSUED FOR PRICING

M. Moncef Hadiji, P.E. Florida License #48022

,	51315
Issue Date:	04-10-1
Drawn By:	JN
Approved By:	MM
Scale:	12" = 1'-0

ELECTRICAL NOTES, LEGEND, AND SPECIFICATIONS

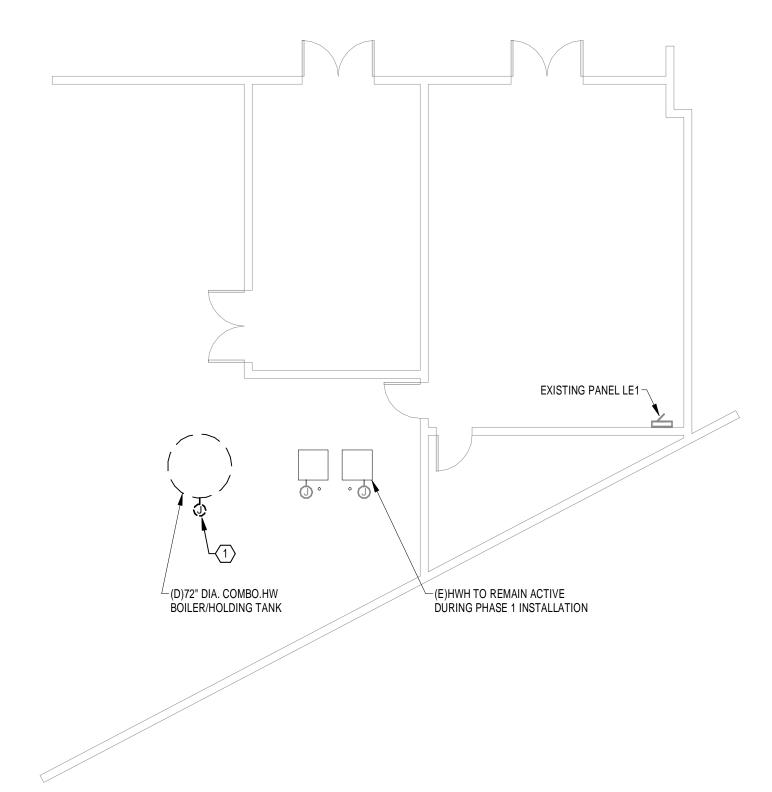
Drawing No.:

Project No.:

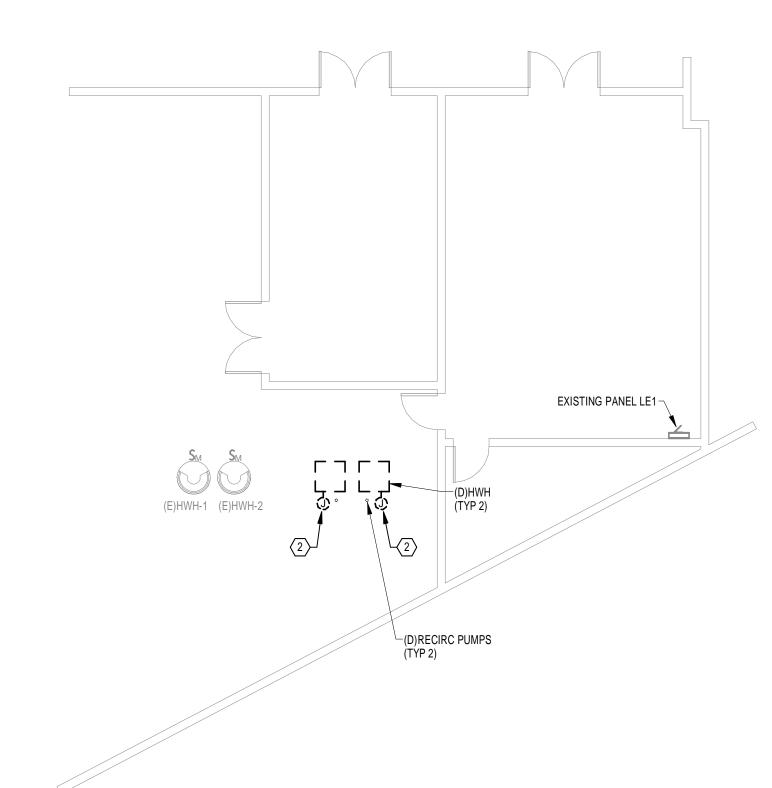
Drawing Title:

E-1

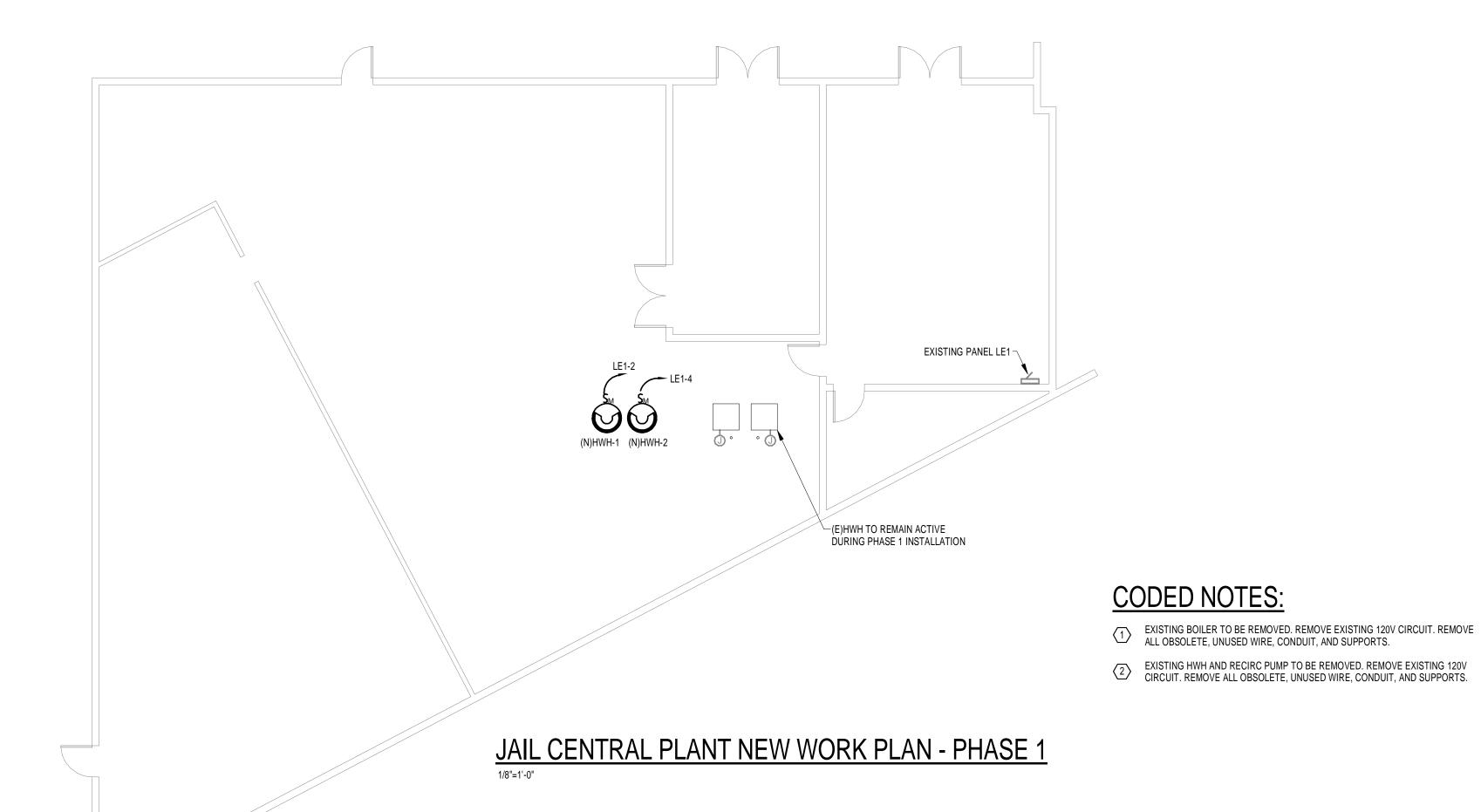
<b>Notes:</b> Existing	Location: Supply From: Mounting: Surface Enclosure: Type 1					Volts Phases Wires		8 Wye				A.I.C. Rating: 10,000  Mains Type: MCB  Mains Rating: 100 A	
СКТ	Circuit Description	Trip	Poles		A		В		С	Poles	Trip	Circuit Description	СКТ
1	Existing	20 A	1	-						1	20 A	HWH-1 (1)	2
3	Existing	20 A	1			-	na.			1	20 A	HWH-2 (1)	4
5	Existing	20 A	1					~	-	1	20 A	Existing	6
7	Existing	20 A	1	-	na.					1	20 A	HWH-3 (1)	8
9	Existing	20 A	1			-	no.					Space	10
11	Coore	20. 4	_					-	-	1	20 A	Existing	12
13	Spare	20 A	2	-	no.					1	20 A	Existing	14
15	Existing	20 A	1			-	~			1	20 A	Existing	16
17	Existing	20 A	1					-	-	1	20 A	Existing	18
19	Existing	20 A	1	-	no.					1	20 A	Existing	20
21	Existing	20 A	1			-				1	20 A	Existing	22
23	Existing	20 A	1					-	-	1	20 A	Existing	24
25	Existing	20 A	1	-	-					1	20 A	Existing	26
27	Existing	20 A	1			-	-			1	20 A	Existing	28
29	Existing	20 A	1					_	-	1	20 A	Existing	30

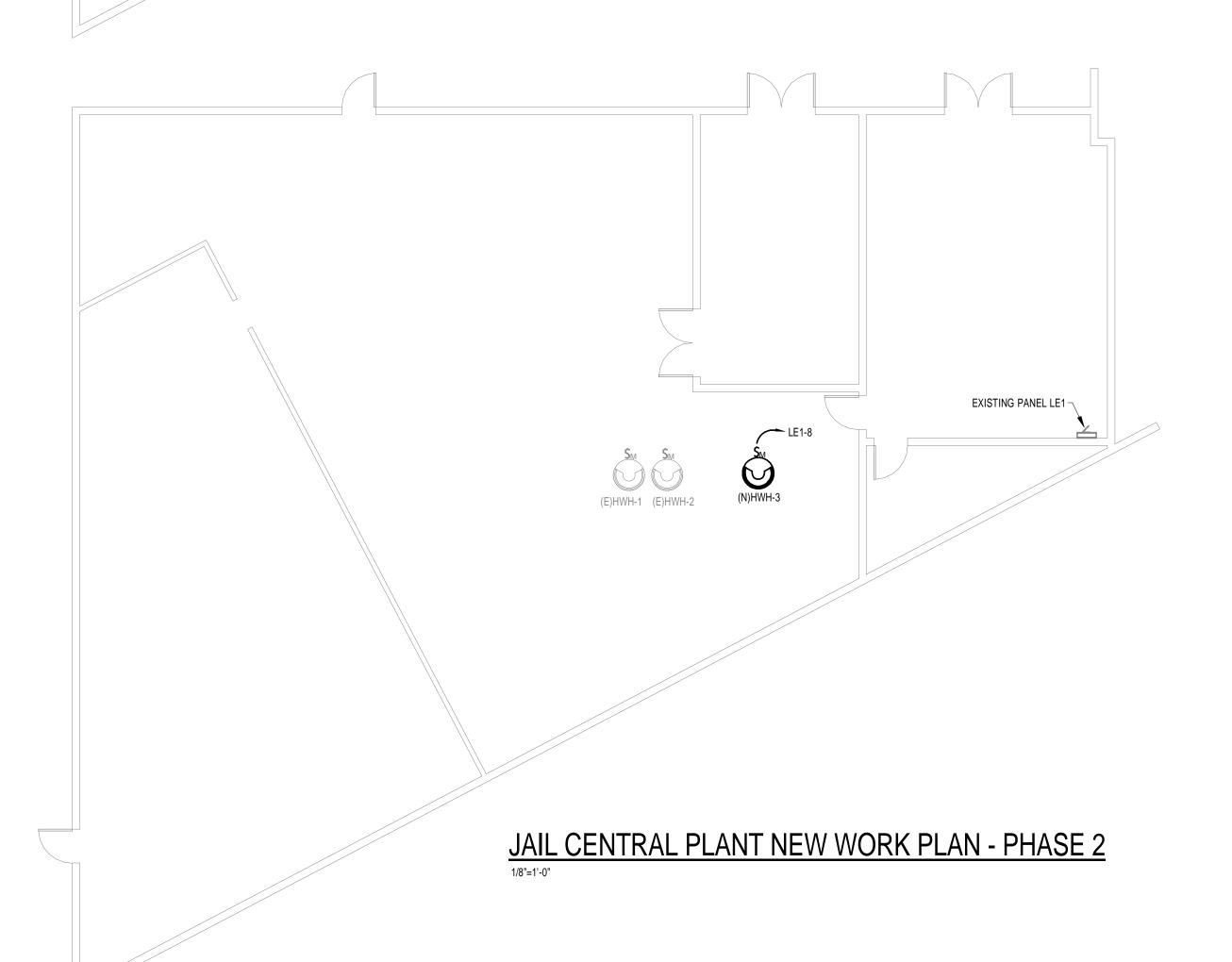


# JAIL CENTRAL PLANT DEMOLITION PLAN - PHASE 1 1/8"=1'-0"



JAIL CENTRAL PLANT DEMOLITION PLAN - PHASE 2
1/8"=1'-0"







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No.	Date	Description
	04/10/14	ISSUED FOR PRICING

M. Moncef Hadiji, P.E. Florida License #48022

513151	Project No.:
04-10-14	Issue Date:
JNF	Drawn By:
MMH	Approved By:
1/8" = 1'-0'	Scale:
	Drawing Title:

ELECTRICAL PLANS

E-2